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Macro Economic Determinants of Bad Loans in Indian Mortgage Market

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ABSTRACT

The macro economic factors have a serious impact on the housing credit. Non-Performing loan is the most important factor that is used to measure the financial institutions performance and success of the mortgage market. This paper focusses on the significance and relationship between macro-economic variables such as Gross domestic product growth (GDP), Inflation, Interest rate and growth of Real estate market with Non-performing loans of Housing Finance Companies in India.

Keywords: Non-Performing Loans (NPL), Inflation, Credit Risk, Real Estate growth, Gross Domestic Product (GDP), Bad loans.

1. INTRODUCTION

Housing Credit market is an evergreen market which contributes a major share in the entire economy's credit growth as the need for a house will never end. In order to develop the housing sector we need to have a well-developed housing finance market. India's housing loan sector has transformed substantially over the past few years reflecting its quality and quantity. The Indian Prime Minister's "housing for all" scheme (Pradhan Mantri Awas Yojna) paved the way for a new era in the housing loan sector in India. It elevated the home loan sector by generating an environment supportive for expanding credit flow and increasing home ownership

It is also important to have an eye on the external threats that will lead to credit risk in the housing credit sector. The story of the US subprime lending crisis alarms us about the adequate attention we need to pay on the macro economic factors , as any hurdle in the flow of credit will have a serious impact on the economy. Credit risk refers to probability of default or loss due to non-fulfilment of contractual obligations, business cycle fluctuations and market bubbles. One the loan ceases to generate income it is termed as "Non-Performing loans" or "Bad Loans".

Credit crisis takes place at the very peak of business cycle, resulting in rapid shift from credit expansion to credit contraction, that is financial crisis triggers the downturn rather than downturn triggering the financial crisis. This will lead to external trade shocks, slowdown of economic boom which will in turn lead to falling output and raising unemployment. Thus, Macroeconomic players in the economy have a lot to contribute towards the flow of credit cycle. This paper aims to analyse the macro economic factors determining the risk of loan defaults in Indian Housing finance companies.

2. LITERATURE REVIEW

Dr. Ludovic Renou says bad loans are key factor in banking crisis. He concludes by saying it would be worth to analyse the macroeconomic determinants of non-performing loans with econometric procedures such as vector auto regressive and panel data models.

IMF working paper says high levels of NPL's pose a burden to the economy inter alia through limited bank lending highlights the need for a swift, but orderly clean up the bank portfolios. The resolution of NPL should be done in a collective and cooperative fashion that will benefit both debtors and creditors.

Ahlem Selma Mesai and Fathi Jouini attempted to study the variables that affect and influence doubtful accounts at credit institutions for a sample of European banks. The author has suggested that banks should give interests to variables when they offer loans in order to reduce the level of non-performing loans.

3. RESEARCH METHODOLOGY

The data prerequisite to the study has been collected from the secondary sources such as RBI, financial statements of banks, World Bank, annual reports, government publications and conference papers. A set of 17 Housing Finance companies (HFCs) namely HDFC LTD, India bulls hsg, LICHFL, PNB Housing, Gruh Finance, Deewan Housing, CanFin Homes, Repco Home Finance, GIC Housing Finance, Shastra Infra, crest Ventures, Coral India, Indian Home loans, SRG Housing, Asya Info, Sahara housing, Indian Bank Housing are considered and the impact of macroeconomic determinants on the NPL of these banks are studied for a period of 11 years. Macro-economic determinants considered are Real estate growth, Gross Domestic Product (GDP), Interest, Inflation. The following hypothesis has been considered:

H1: GDP has a negative impact on non-performing loans

H2: Interest rate has a positive impact on non-performing loans

H3: Inflation has a positive impact on non-performing loans

H4: Real estate growth has a positive impact on non-performing loans

4. REGRESSION ANALYSIS

Model Summary (NPL)

R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
.96	.91	.86	.20

ANOVA (NPL)

	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
Regression	2.58	4	.64	15.90	.002
Residual	.24	6	.04		
Total	.282	10			

Coefficients (NPL)

	Unstandardized Coefficients		*Standardised Coefficients*	*t*	*Sig.*
	B	*Std. Error*	*Beta*		
(Const)	–4.32	1.34	.00	–3.22	.015
Inflation	–.02	.04	–.14	–.65	.540
Interest	.05	.04	.29	1.50	.184
GDP	–.02	.05	–.08	–.54	.610
RealestGr	.48	.11	.83	4.58	.004

KARL PEARSON'S CORRELATION

		NPL	*Inflation*	*Interest*	*GDP*	*Real Estate Growth*
NPL	Pearson Correlation	1	–.72	.42	–.40	.87
	Sig. (2 tailed)		.012	.202	.228	.001
	N	11	11	11	11	11
Inflation	Pearson Correlation	–.72	1	–.70	–.15	–.47
	Sig. (2 tailed)	.012		.016	.666	.148
	N	11	11	11	11	11
Interest	Pearson Correlation	.42	–.7	1	–.03	.03
	Sig. (2 tailed)	.202	.016		.938	.924
	N	11	11	11	11	11
GDP	Pearson Correlation	–.40	–.15	–.03	1	.55
	Sig. (2 tailed)	.228	.666	.938		.078
	N	11	11	11	11	11
Real Estate Growth	Pearson Correlation	.87	–.47	.03	.55	1
	Sig. (2 tailed)	.001	.148	.924	.078	
	N	11	11	11	11	11

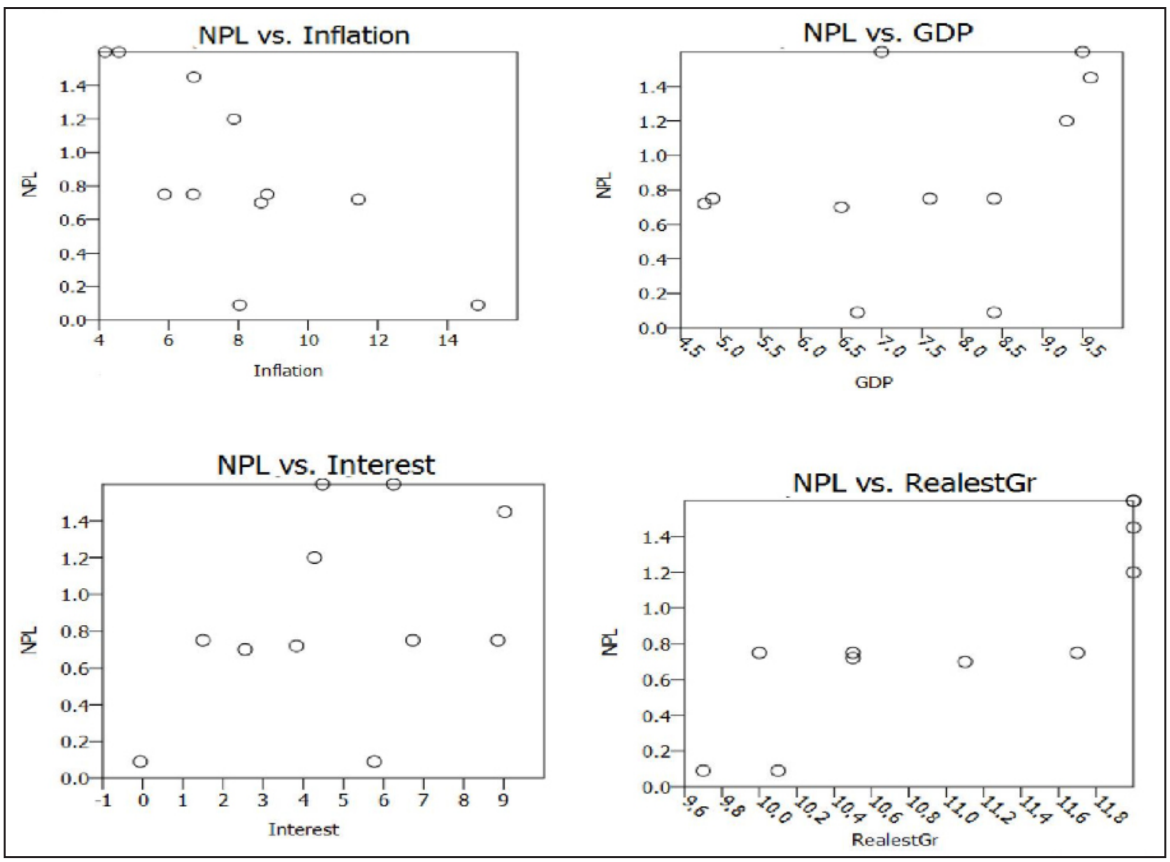
5. FINDINGS

1. Significance F is .002 at 95% confidence interval implies that regression analysis as a whole is significant, indicating that Non-Performing loans in Indian Housing Credit market are influenced by macroeconomics factors

2. R square of .91 implies that 91% variation in percentage change in non-performing loan can be explained by variation in macro-economic factor.

3. **H1:** GDP and NPL are negatively correlated (Beta -.08) which signifies when there is increase in NPL ,GDP decreases as there is a coercion in the economy to pay back the debts. Hence the focus on economic activity reduces. On the other hand when GDP increases people feel the fidelity towards repayment of obligations hence NPL reduces.

4. **H2:** The relationship between NPL and interest is positive (Beta .29). This shows both increase and decrease together, which is quite evident from the historical data and previous researches which explains the inability of borrowers to pay back their loans when there is increase in interest rate and no corresponding increase in income.



5. **H3:** The Direction of relationship is negative for NPL and Inflation, as NPL and inflation are negatively correlated, (Beta -.14) which means if one increases other decreases and vice versa. This is quite obvious and expected as we now when there is rise in price people will be unable to meet their obligations on time as their day to day living itself will be a struggle, on the other hand when prices are low people take their best efforts to finish their obligations.

6. **H4:** Real Estate growth is a very import factor while measuring the performance of Housing credit market. The relationship between NPL and Real estate sector growth is positive (Beta .83). This means NPL does not largely depend on performance of real estate market as it depends more on customer's income and other economic factors. It is the Credit growth in Housing market which is largely dependent on the real estate sector's growth.

6. CONCLUSION

Our findings support the previous researches on impact of macro-economic variables on non-performing loans in other countries. Though commercial banks are also provide mortgage loans Housing Finance Corporations (HFC) are the key players in providing housing credit. In order to properly examine the quality of business in a mortgage lending company it is appropriate to look at different categories of lending which it undertakes so that we can evaluate the level of security underlying the mortgage loans. In this connection one should look into the "loan to value "ratio of each category and capacity of borrower to maintain monthly payment.

Mortgage loans that adhere to industry "best practice" benchmarks are considered to be the most secured loans in financial institutions. One key constraint on housing credit lending is the prospective return on the loan. In an economic boom, when the prospects for repayment are good, the HFCs are happy to lend money, sometimes even to quite risky borrowers. In a recession the HFCs are much more reluctant to lend, although they may still accept some risk of default if the interest rate on loan is high enough. This means the lenders perception about the future are a major determinant of the growth of money and credit.

An amplification of credit cycle comes from the raise and subsequent fall of in prices of land and housing. During the boom the high –risk borrowers obtained credit against the expectations that Prices would continue to raise further. As prices fall, the supply of credit vanishes. Furthermore, asset price falls reduce the value of collateral that borrowers can pledge against their lending, so further reducing their supply and cost of credit.

The above result proves that macroeconomic factors have a significant impact on non-performing loans of housing finance companies in India. It can be concluded that HFCs need to be patient and calm while lending credit during the boom period so that the economy's stress during the recession will reduced.

References

Jakubik, P., & Reininger, T. (n.d.). What are the key determinants of Non-performing Loans in CESEE? DOI: 10.1787/888932958030.

Tanasković, S., & Jandrić, M. (2015). Macroeconomic and Institutional Determinants of Non-performing Loans. Journal of Central Banking Theory and Practice, 4(1). DOI:10.1515/jcbtp-2015-0004.

Kjosevski, J., & Petkovski, M. (2016). Non-performing loans in Baltic States: determinants and macroeconomic effects. Baltic Journal of Economics, 1-20. DOI:10.1080/1406099x.2016.1246234.

Non-performing loans (% of credits) in Spain, all credit institutions, DOI: 10.1787/fin_sme_ent-2015-graph43-en.

Tiwari, C. (2015). Management of NPL: Comparative Analysis of Non-Performing Assets in Selected Commercial Vs Co-operative Banks in Pune. Asian Journal of Research in Banking and Finance, 5(8), 59. DOI:10.5958/2249-7323.2015.00100.5.

Klein, N. (2013). Non-Performing Loans in CESEE: Determinants and Impact on Macroeconomic Performance. IMF Working Papers, 13(72), DOI:10.5089/9781484318522.001.

Chaibi, H. (2016). Determinants of Problem Loans: Non-performing Loans vs. Loan Quality Deterioration. International Business Research, 9(10), 86. DOI:10.5539/ibr.v9n10p86.

Touny, M.A., & Shehab, M.A. (2015). Macroeconomic Determinants of Non-Performing Loans: An Empirical Study of Some Arab Countries. American Journal of Economics and Business Administration, 7(1), 11-22. DOI:10.3844/ajebasp.2015.11.22.

Milne, A. (2009). The fall of the house of credit: what went wrong in banking and what can be done to repair the damage? Cambridge, UK: Cambridge University Press.

Cossin, D., & Pirotte, H. (2001). Advanced credit risk analysis: financial approaches and mathematical models to assess, price, and manage credit risk. New York: John Wiley & Sons.

Skarica, B. (2014). Determinants of non-performing loans in Central and Eastern European countries. Financial Theory and Practice, 38(1), 37-59. DOI:10.3326/fintp.38.1.2.